

6 SUMMARY MATRICES

● LOW or GOOD ● MODERATE or AVERAGE ○ HIGH or POOR

6 CRITERIA SUMMARY MATRIX
Segments for Eastern Alignments A, B, & C

Criteria	Eastern Segment 1	Eastern Segment 2	Eastern Segment 3	Eastern Segment 4	Eastern Segment 5	Eastern Segment 6	Tunnel Segment
Brief Description	Blair Rd. to Van Buren to Sandy Spring to Maple; all on road. Used in Alignments A, B, C	Vine St. to Elevation 314 development, across Carroll St. on a bridge, above Metro entrance to Metro elevator. Used in Alignment A only	Corner of Maple and Vine, left on Carroll St., right on Cedar St, left on Eastern Ave. Used in Alignments B and C	Trail connecting the Metro elevator to Eastern Ave. crossing Metro parking lot. Used in Alignment C only	Trail above Metro elevator entrance onto a raised trail above parking lots of apartments and Coop on Eastern Ave onto a trail behind the Cady Lee house and over Piney Branch on a bridge. Used in Alignments A and C	Bike lanes on Eastern Ave from Metro parking entrance up to Piney Branch Rd. Used in Alignment B only	The segment would be a new tunnel through the Metro embankment adjacent to the elevator tunnel that would connect eastern and western alignments. Can be used in Alignments A, B, D and E
Continuity	AVERAGE Three (3) intersection crossings ●	GOOD Zero (0) intersection crossings ●	POOR Three (3) intersection crossings ○	GOOD Zero (0) intersection crossings ●	GOOD Zero (0) intersection crossings ●	AVERAGE Two (2) intersection crossings ●	GOOD. Zero (0) intersection crossings ●
Elevation Change	AVERAGE. Steep hill on Blair Rd. from Van Buren to Underwood St. Flat for the remainder of the segment. ●	GOOD. Flat, minimal change in grade. ●	AVERAGE. Gradual slope on hill on Eastern Ave and turn with Cedar St. ●	AVERAGE. Flat, minimal change in grade across Metro parking lot . Ramps down to Metro and other access points would require a short, steep ramp. ●	GOOD. Flat, minimal change in grade. ●	POOR. Steep, long hill. ○	AVERAGE. Slight change in grade from east to west ●
Trail Access	AVERAGE. The majority of this segment travels on streets dominated by residential development. However, commercial & industrial uses are nearby (e.g., Sandy Spring Road). ●	POOR. Trail segment provides access to residential areas near Maple and Vine. Single ramp down to Metro elevator entrance at North end of segment. ○	GOOD. Trail segment provides direct access to residential areas on Maple, Cedar, Eastern, and Metro users and commercial/retail uses in the Carroll St. area. Offers best connection to Old Town Takoma Park ●	AVERAGE. Provides frequent and convenient access to residential areas and Metro users. Specific location within Metro property uncertain at current time. ●	AVERAGE. Lacks any trail access between Metro and Piney Branch Rd. However, length of segment is short. ●	GOOD. Unlimited trail access along Eastern Ave. which is predominantly residential. ●	AVERAGE. Provides access to residential property on Spring Place and to Blair Road. ●
Metro Access	AVERAGE. Nearby Metro Station and bus stops. ●	GOOD. Direct ramp down to Metro Station and bus stops. ●	AVERAGE. On street route passes next to Metro Station and bus stops. ●	GOOD. Trail connects directly into Metro Station parking lot and bus stops. ●	GOOD. Direct ramp down to Metro Station and bus stops. ●	AVERAGE. Nearby Metro Station and bus stops. ●	GOOD. Provides direct access to the elevator tunnel. ●
Trail Safety	AVERAGE. Traffic separated sidepath on Blair Rd. Once trail turns onto Van Buren, streets have much lower traffic volume and trail can share the road. ●	GOOD. Bridge overpass eliminates conflicts with Carroll St. and Metro entrance. ●	POOR. On-street trail requiring intersection crossings at Maple/Carroll, Cedar/Cedar, and Cedar/Eastern intersections. Traffic volumes are high on all of these streets. ○	AVERAGE. Dependent upon delineation of trail through parking lot. ●	GOOD. Trail is above grade of traffic and runs above Piney Branch on a bridge. ●	POOR. Steep hill. Heavy traffic volumes including Metro buses along Eastern. At-grade crossing of Piney Branch/Eastern intersection and full-way stop along Eastern Ave. ○	GOOD. Provides safe crossing between east and west sides of railroad tracks. ●
Personal Security	AVERAGE. Blair Rd. is well-lit and heavily traveled; other streets have less lighting and less activity. ●	AVERAGE. Vine St. and Sandy Spring are less traveled and not well-lit. However, trail portion along rail line affords excellent visibility within a high activity area. Good police presence. ●	AVERAGE. This segment is well traveled and well lit. Close proximity to Metro and commercial/retail uses on Carroll St. ●	AVERAGE. Parking lot is well-lit and well traveled with good police presence. ●	AVERAGE. Trail portion along rail line affords excellent visibility within a high activity area. Trail portion behind apartments and Cady Lee house are less visible. ●	GOOD. Eastern Ave. is well lit and well traveled. Design would provide dedicated bike lanes in both directions. ●	POOR. Tunnel that will be open at all hours and unattended. Similar to concerns at the Metro elevator tunnel. ○
Economic Development	POOR. Segment does not travel along commercial/retail corridor. ○	POOR. Provides limited access at the Metro station to commercial/retail along 4th, Carroll and Cedar Streets. ○	GOOD. Provides direct access to commercial/retail along Carroll and Cedar Streets and close proximity to Old Town Takoma Park. ●	AVERAGE. Provides limited access at the Metro station to commercial/retail along Carroll and Cedar Streets. ●	AVERAGE. Minimal adjacent commercial/retail activity which is true for other segments in this area. ●	AVERAGE. Segment does not travel along commercial/retail corridor. ●	AVERAGE. Provides access to businesses along Spring Pl. ●
Aesthetics of Trail	AVERAGE. Segment is a sidepath on Blair Rd. and shared roadways on other streets. It does not affect surrounding areas. ●	AVERAGE. Trail is highly visible above Carroll St underpass and above the Metro station entrance. ●	AVERAGE. Segment is a shared roadway with bikes and autos and does not affect surrounding areas. ●	GOOD. Segment is an onstreet bike lane through the Metro parking lot and does not affect surrounding neighbors. ●	AVERAGE. Trail is visible behind Eastern Ave apartments and Cady Lee house but could be designed and landscaped to minimize impact of trail and rail road. Bridge crossing over Piney Branch. ●	AVERAGE. Segment is an on-street bike lane and would remove on-street parking on Eastern Ave. ●	AVERAGE. Tunnel is part of the Metro site and will blend in with other Metro uses. ●
Neighborhood Impact	LOW. On-street trail retains adequate automobile rights-of-way. No private property involved. ●	HIGH. This segment would require acquisition of a portion of private property on which the Elevation 314 development is under construction. ○	MODERATE. Shared roadways for bikes and autos would increase the level of vehicular traffic on all streets in the segment. ●	LOW. Segment travels through Metro parking lot. ●	HIGH. Residents of Eastern Ave. apartments and coops express concern with trail crossing above their parking area. Concern raised regarding path crossing adjacent to NRHP-listed Cady Lee house. ○	HIGH. Removal of parking along Eastern Ave. would adversely impact adjacent residents who rely heavily on these parking spots for guest parking. Area has a shortfall of available parking. ○	LOW. Tunnel will add more visibility to underused areas of Chestnut St. and Spring Pl. ●
Environmental Impact	LOW. Would have little or no additional environmental impacts. ●	MODERATE. Would require stormwater runoff remediation for grade separated trail. No vegetation affected. ●	LOW. Would have little or no additional environmental impacts. ●	LOW. Would have little or no additional environmental impacts. ●	HIGH. Would pass by NRHP-listed Cady Lee house and through National Park Service land. An Environmental Assessment (EA) would be required. ○	LOW. Would have little or no additional environmental impacts. ●	MODERATE. Tunnel may affect slope on western side of the tracks. ●
Construction Costs	LOW. Involves design/construction of dedicated bike lane along Blair Rd. ●	HIGH. Bridge over Carroll St. and trail along rail line would be costly to design/construct. ○	LOW. Involves signage of shared roadway along all affected streets. ●	LOW. Verbal commitment from developers to construct this portion of trail. ●	HIGH. Trail designed at grade with rail line for majority of length including a bridge over Piney Branch Rd. ○	LOW. Involves design/construction of dedicated bike lanes along Eastern Ave. ●	HIGH. Requires engineering and constructing a new tunnel under the Metro tracks through the embankment. ○
Land Acquisition	LOW. Involves removal of traffic lane along Blair Rd. ●	HIGH. Requires property acquisition of portion of private property and WMATA property. ○	LOW. All portions of trail are shared roadways. ●	LOW. Segment will be designed as a part of the proposed Metro-site development and does not affect surrounding neighbors. ●	HIGH. Requires property acquisition and easements of WMATA, NPS, and private property. ○	LOW. All portions of segment are on-street bicycle lanes. ●	HIGH. Requires acquisition of easements or purchase of WMATA land under the rail line. ○

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6 CRITERIA SUMMARY MATRIX
Segments for Western Alignments D & E

Criteria	Western Segment 1	Western Segment 2	Western Segment 3	Western Segment 4	Tunnel Segment
Brief Description	North Dakota Ave to 3rd St to Whittier to 4th St to Blair/4th/Cedar intersection. Used in Alignment E	Blair Rd. on street to Underwood St. and change up to a cantilevered bridge/trail on top of wall to cross Cedar St. on a bridge. Used in Alignment D	Trail along the western side of the rail tracks to a bridge at Piney Branch Rd or use switchbacks to get down to Piney Branch.. Used in Alignment D	Cross the Cedar/Blair/4th St intersection at crosswalks and cross next to the Cedar Crossing development on a trail to Spring Place. Turn right turn onto Chestnut and cross Piney Branch on a bridge or use switchbacks to access Piney Branch Rd. Used in Alignment E	The segment would be a new tunnel through the Metro embankment adjacent to the elevator tunnel that would connect eastern and western alignments. Can be used in Alignments A, B, D and E
Continuity	POOR Seven (7) intersection crossings ○	GOOD. Zero (0) intersection crossings ●	GOOD. Zero (0) intersction crossings ●	POOR Two (2) difficult intersection crossings ○	GOOD. Zero (0) intersection crossings ●
Elevation Change	AVERAGE. Gradual hill on North Dakota Ave. from Kansas Ave to 3rd St. ●	GOOD. Flat, no change in grade. ●	AVERAGE. Flat, no change in grade. Ramps down to Metro and other access points would require a short, steep ramp. ●	GOOD. Flat until the steep hill at Piney Branch. ●	AVERAGE. Slight change in grade from east to west ●
Trail Access	GOOD. Provides access to residential areas as well as 4th Street and Cedar Street retail and commercial areas. ●	POOR. Segment travels along grade separated trail for 2000 feet with access points only at the two end points. ○	AVERAGE. Segment travels along grade-separated trail with access points only at the two end points. This trail segment is relatively short. ●	AVERAGE. Provides frequent & convenient access points to residential property along Chestnut St., portions of Spring Place and Piney Branch. South end of segment provides access to retail/commercial areas on Cedar St. and 4th St. ●	AVERAGE. Provides access to residential property on Spring Place and to Blair Road. ●
Metro Access	AVERAGE. Metro Station is near northern point of segment. ●	AVERAGE. North end of segment provides close access to Metro Station and bus stops. ●	AVERAGE. South end of segment provides close access to Metro Station and bus stops. ●	AVERAGE. South end of segment provides access to Metro Station and bus stops. ●	GOOD. Provides direct access to the elevator tunnel. ●
Trail Safety	AVERAGE. All streets are large enough to safely accommodate a dedicated bike lanes and a sidepath along the 4th Street business district. ●	GOOD. Majority of trail at grade with rail line eliminating conflicts with all street intersections and traffic. ●	GOOD. Majority of trail at grade with rail line eliminating conflicts with all street intersections and traffic. May require crossing Piney Branch at Eastern Ave. crosswalk (Option 1). ●	POOR. Requires crossing Cedar St./Blair Rd./4th St. intersection. May require users to cross Piney Branch Rd. at Eastern Ave. crosswalk (Option 1). ○	GOOD. Provides safe crossing between east and west sides of railroad tracks. ●
Personal Security	GOOD. 3rd St., Whittier St., and 4th St. are well lit. 3rd St. and 4th St. are well traveled with adequate police presence. ●	POOR. Blair Rd. to Underwood St. intersection is well traveled and well lit. Remainder of segment would be above grade trail with no exits points and long areas with limited emergency vehicle access. ○	AVERAGE. Trail is somewhat isolated from well traveled areas as it travels between private property and rail line. Requires increased lighting. Limited police presence. ●	AVERAGE. Spring Place and Chestnut St. are not high activity areas, particularly after regular business hours. Trail is on-street providing points to exit trail. ●	POOR. Tunnel that will be open at all hours and unattended. Similar to concerns at the Metro elevator tunnel. ○
Economic Development	GOOD. Provides direct access to 4th Street and Cedar Street retail and commercial areas. ●	AVERAGE. Provides limited access to retail/commercial areas along Cedar Street, some access to 4th St. ●	AVERAGE. South end of segment provides direct access to Cedar St. and 4th St. retail and commercial districts. ●	AVERAGE. South end of segment provides access to Cedar St. and 4th St. retail and commercial districts. ●	AVERAGE. Provides access to businesses along Spring Pl. ●
Aesthetics of Trail	AVERAGE. 4th St. is an attractive streetscape with well-maintained homes and properties. 4th St. retail corridor is historic attribute to area. ●	POOR. Above grade trail will be highly visible from apartments on west side of Blair Rd. ○	AVERAGE. Segment travels between private property and rail line. Trail will be visible from private homes and proposed housing development. ●	AVERAGE. On-street route will not affect the mix of commercial and industrial uses with no landscaping or sidewalk. Aesthetics for trail users will be poor (see Photo 17). ●	AVERAGE. Tunnel is part of the Metro site and will blend in with other Metro uses. ●
Neighborhood Impact	LOW. Trail traffic would not result in appreciable impact to surrounding neighborhoods. ●	MODERATE. Requires use of WMATA land behind the Chinese restaurant and liquor store on the Blair Rd side of Cedar St. ●	MODERATE. Dependent largely on amount of private property required to construct trail. Mostly industrial uses currently. ●	LOW. Trail traffic will add more visibility to underused areas of Chestnut St. and Spring Pl. ●	LOW. Tunnel will add more visibility to underused areas of Chestnut St. and Spring Pl. ●
Environmental Impacts	LOW. Trail is on-street bicycle lanes through wide residential streets and a sidepath along 4th Street business district. ●	LOW. Trail will need stormwater run-off controls above Blair Rd. ●	MODERATE. Trail may affect vegetation along rail line. Erosion and runoff may be a factor during construction. ●	LOW. Trail is on-street bicycle route through residential streets. ●	MODERATE. Tunnel may affect slope on western side of the tracks. ●
Construction Costs	LOW. Requires painting dedicated bike lane along segment and constructing the sidepath. ●	HIGH. Bridge-type trail at grade with rail line and bridge over Cedar St. would be very expensive to design and construct. ○	HIGH. Separated at-grade trail along rail line, bridge over Piney Branch and a ramp down to the sidewalk or switchbacks down the hill on WMATA property at Piney Branch. ○	HIGH. Bridge crossing Piney Branch or switchbacks down the hill on WMATA property at Piney Branch. ○	HIGH. Requires engineering and constructing a new tunnel under the Metro tracks through the embankment. ○
Land Acquisition	LOW. No property acquisition required. ●	MODERATE. Requires acquisition of easements or purchase of WMATA land along wall and behind liquor store. ●	HIGH. Requires acquisition of easements or purchase of WMATA land and possible private property along rail line. ○	MODERATE. Requires acquisition of easements or purchase of WMATA land along rail line at Piney Branch. ●	HIGH. Requires acquisition of easements or purchase of WMATA land under the rail line. ○

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6 SUMMARY OF CRITERIA ANALYSIS FOR ALIGNMENTS

CRITERIA	Alignment A Segments 1, 2, 5 (eastern)	Alignment B Segments 1, 3, 6 (eastern)	Alignment C Segments 1, 3, 4, 5 (eastern)	Alignment D Segments 2, 3 (western)	Alignment E Segments 1, 4 (western)
Continuity	● There are minimal at-grade crossings and the proposed crossings are located on side streets. There are 3 turns.	○ There are three main intersections with heavy vehicle traffic where bikes would share the road. There are 5 turns.	● There are two main intersections with heavy vehicle traffic where bikes would share the road without bike lanes. There are 7 turns.	● There are no at-grade crossings in the study area. There are only 2 turns.	○ There is one main intersection with multiple crossings and a number of side street intersections. Trail would be predominantly on street. There are 6 turns.
Elevation Change	○ There is a long gradual slope on Blair down to Van Buren and relatively flat afterwards.	○ There is a long gradual slope on Blair down to Van Buren and a long gradual slope on Eastern Ave.	○ There is a long gradual slope on Blair down to Van Buren and relatively flat afterwards.	● The trail is flat for the whole length of the study until the steep change of grade at Piney Branch.	○ There is a long gradual slope down North Dakota Ave to 3rd street and relatively flat afterwards until the change of grade at Piney Branch.
Trail Access	○ There is good trail access for the southern half of the alignment as it runs on street and then limited access at the Metro and at Piney Branch Rd.	● There is good trail access for the entire length of the trail as it runs completely on street.	● There is good trail access for most of the alignment and then limited access for a short portion from the Metro elevator to Piney Branch Rd.	○ There is limited trail access as the majority of the trail is attached to the Metro retaining wall along Blair Rd.	● There is good trail access for the entire length of the trail as it runs completely on street.
Metro Access	● There is direct trail access to the Metro.	○ The access to the Metro is from Eastern Ave.	● There is direct trail access to the Metro.	○ There is access to the Metro from the western side of the entrance via Carroll/Cedar Street.	○ There is access to the Metro from the western side of the entrance via Carroll/Cedar Street.
Trail Safety	● There are few safety concerns related to auto traffic.	○ The trail runs completely on street, some with high traffic volumes. There are a number of busy intersections and sections where bikes share the road without designated bike lanes.	○ The trail runs on both street and off street trails, offering some relief from busy intersections and roads, most notably Eastern Ave.	● There are few safety concerns related to auto traffic.	○ The trail passes through neighborhood streets (North Dakota/3rd/4th) and then passes through the difficult Blair/4th/Cedar intersection.
Personal Security	○ The trail runs on residential streets and on short portions of elevated trail with frequent access ramps.	○ This alignment runs on residential streets and on short portions of elevated trail with frequent access ramps.	○ For most of the length, this alignment is on street providing unlimited access.	○ The alignment has a long portion of elevated trail with no entrance/exit points.	○ For most of the length, this alignment is on street, providing unlimited access.
Economic Development	○ The trail runs along the Metro right of way and through residential streets with no direct access to business areas.	○ This alignment runs two blocks away from Old Town Takoma Park, MD.	○ This alignment runs two blocks away from Old Town Takoma Park, MD.	○ This alignment runs along the Metro right of way and along the Metro wall above Blair Rd. There is no direct access to business areas.	● This alignment goes through the 4th Street business area.
Aesthetics of Trail	○ The trail runs through the new Elevation 314 development, above the Metro entrance and behind the buildings on Eastern Ave.	● This alignment is predominantly on street and would not require any new structures.	○ This alignment would be a combination of on-street bike use and a trail located behind the buildings on Eastern Ave.	○ This alignment would use a long trail structure attached to the Metro retaining wall from Underwood to Butternut. There would also be a portion of trail next to the Cedar Crossing development and the houses at the end of Chestnut Street.	○ This alignment would use on-street facilities up to the Metro. The section north of Cedar would be a combination of trail and on-street facilities on Spring Place and Chestnut Street.
Neighborhood Impact	○ This alignment is a mix of on street usage with little negative impact and then off street trail that greatly affects the Elevation 314 development and the buildings on Eastern Ave.	○ This alignment is predominantly on street and would negatively affect the parking along Eastern Ave. to accommodate on street bikes.	○ This alignment is a mix of on-street usage with little negative impact and then off street trail that negatively affects the buildings on Eastern Ave.	○ This alignment follows the Metro line and would affect some of the homes at the end of Chestnut Street.	○ This alignment would positively affect the area as it passes along the 4th Street business district and through the underused Spring Place and Chestnut Street but would negatively affect homeowners along Chestnut Street.
Environmental Impact	○ This alignment would have limited environmental impacts along the majority of the length. An Environmental Assessment (EA) would be necessary for the National Park Service land and the Cady Lee house at Piney Branch Road.	● This alignment would have no environmental impacts.	○ This alignment would have limited environmental affects along the majority of the length. An Environmental Assessment (EA) would be necessary for the National Park Service land and the Cady Lee house at Piney Branch Road.	○ The off-road trail may affect the vegetation between Cedar Street and Piney Branch.	● This route would have minimal environmental impacts.
Construction Costs	○ This alignment uses new trail and bridge construction.	● Minimal costs as the alignment is on street and would require no new construction.	○ This alignment uses new trail and bridge construction.	○ High costs due to the elevated trail along Blair Rd.	○ Minimal costs as this alignment is predominantly on street. New trail construction would be required near the Cedar Crossing development.
Land Acquisition	○ Property would be required from a number of land owners including the Elevation 314 development, WMATA, and the National Park Service.	● No additional land would be needed.	○ Land would be needed from WMATA and National Park Service.	○ Land would be needed from WMATA, private property, as well as cooperation with WMATA for the cantilevered bridge on the Blair Rd. retaining wall.	● Land would be needed from WMATA at Piney Branch.